

## NOTE:

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Rule	Date Active
R307-505	January 26, 2018
R307-401-10	March 2, 2018
R307-504	March 2, 2018
R307-506	March 2, 2018
R307-507	March 2, 2018
R307-508	March 2, 2018
R307-509	March 2, 2018
R307-510	March 2, 2018

OIL AND GAS RULES (JAN 2018)

**R307. Environmental Quality, Air Quality.**

**R307-150. Emission Inventories.**

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**R307-150-3. Applicability.**

(1) R307-150-4 applies to all stationary sources with actual emissions of 100 tons or more per year of sulfur dioxide in calendar year 2000 or any subsequent year unless exempted in (a) below. Sources subject to R307-150-4 may be subject to other sections of R307-150.

(a) A stationary source that meets the requirements of R307-150-3(1) that has permanently ceased operation is exempt from the requirements of R307-150-4 for all years during which the source did not operate at any time during the year.

(b) Except as provided in R307-150-3(1)(a), any source that meets the criteria of R307-150-3(1) and that emits less than 100 tons per year of sulfur dioxide in any subsequent year shall remain subject to the requirements of R307-150-4 until 2018 or until the first control period under the Western Backstop Sulfur Dioxide Trading Program as established in R307-250-12(1)(a), whichever is earlier.

(2) R307-150-5 applies to large major sources.

(3) R307-150-6 applies to:

(a) each major source that is not a large major source;

(b) each source with the potential to emit 5 tons or more per year of lead; and

(c) each source not included in R307-150-3(2), R307-150-3(3)(a), or R307-150-3(3)(b) that is located in Davis, Salt Lake, Utah, or Weber Counties and that has the potential to emit 25 tons or more per year of any combination of oxides of nitrogen, oxides of sulfur and PM<sub>10</sub>, or the potential to emit 10 tons or more per year of volatile organic compounds.

(4) R307-150-7 applies to Part 70 sources not included in R307-150-3(2) or R307-150-3(3).

(5) R307-150-9 applies to sources with Standard Industrial Classification codes in the major group 13 that have uncontrolled actual emissions greater than one ton per year for a single pollutant of PM<sub>10</sub>, PM<sub>2.5</sub>, oxides of nitrogen, oxides of sulfur, carbon monoxide or volatile organic compounds. These sources include, but are not limited to, industries involved in oil and natural gas exploration, production, and transmission operations; well production facilities; natural gas

compressor stations; and natural gas processing plants and commercial oil and gas disposal wells, and ponds.

(a) Sources that require inventory submittals under R307-150-3(1) through R307-150-3(4) are excluded from the requirements of R307-150-9.

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**R307. Environmental Quality, Air Quality.**

**R307-401. Permit: New and Modified Sources.**

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**R307-401-10. Source Category Exemptions.**

The source categories described in R307-401-10 are exempt from the requirement to obtain an approval order found in R307-401-5 through R307-401-8. The general provisions in R307-401-4 shall apply to these sources.

(1) Fuel-burning equipment in which combustion takes place at no greater pressure than one inch of mercury above ambient pressure with a rated capacity of less than five million BTU per hour using no other fuel than natural gas or LPG or other mixed gas that meets the standards of gas distributed by a utility in accordance with the rules of the Public Service Commission of the State of Utah, unless there are emissions other than combustion products.

(2) Comfort heating equipment such as boilers, water heaters, air heaters and steam generators with a rated capacity of less than one million BTU per hour if fueled only by fuel oil numbers 1 - 6,

(3) Emergency heating equipment, using coal or wood for fuel, with a rated capacity less than 50,000 BTU per hour.

(4) Exhaust systems for controlling steam and heat that do not contain combustion products.

(5) A well site as defined in 40 CFR 60.5430a, including centralized tank batteries, that is not a major source as defined in R307-101-2, and is registered with the Division as required by R307-505.

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**R307. Environmental Quality, Air Quality.**

**R307-504. Oil and Gas Industry: Tank Truck Loading.**

**R307-504-1. Purpose.**

R307-504 establishes control requirements for the loading of liquids containing volatile organic compounds (VOCs) at oil or gas well sites.

#### **R307-504-2. Definitions.**

The definitions in 40 CFR 60, Subpart OOOO Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution, incorporated by reference in R307-210, apply to R307-504.

"Bottom Filling" means the filling of a tank through an inlet at or near the bottom of the tank designed to have the opening covered by the liquid after the pipe normally used to withdraw liquid can no longer withdraw any liquid.

"Submerged Fill Pipe" means any fill pipe with a discharge opening which is entirely submerged when the liquid level is six inches above the bottom of the tank and the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid.

"Vapor Capture Line" means a connection hose, fitted with a valve that can be connected to tanker trucks during truck loading operations. The vapor capture line shall be designed, installed, operated, and maintained to optimize capture efficiency.

"Well Site" means all equipment at a single stationary source directly associated with one or more oil wells or gas wells.

#### **R307-504-3. Applicability.**

(1) R307-504-4(1) applies to any person who loads or permits the loading of any intermediate hydrocarbon liquid or produced water at a well site after January 1, 2015.

(2) R307-504-4(2) applies to owners and operators that are required to control emissions from storage vessels in accordance with R307-506.

#### **R307-504-4. Tank Truck Loading Requirements.**

(1) Tanker trucks used for intermediate hydrocarbon liquid or produced water shall be loaded using bottom filling or a submerged fill pipe.

(2) VOC emissions during truck loading operations shall be controlled at all times using a vapor capture line. The vapor capture line shall be connected from the tanker truck to a control device or process, resulting in a minimum 95 percent VOC destruction efficiency.

(a) Well sites in operation on January 1, 2018 shall comply with R307-504-4(2) no later than July 1, 2019.

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**R307. Environmental Quality, Air Quality.**

**R307-505. Oil and Gas Industry: Registration Requirements.**

**R307-505-1. Purpose.**

R307-505 establishes requirements for sources in the oil and gas industry to register with the Division.

**R307-505-2. Applicability.**

(1) R307-505 applies to new and existing operations at a source with Standard Industrial Classification codes in the major group 13, which includes but is not limited to industries involved in oil and natural gas exploration, production, and transmission operations; well production facilities; natural gas compressor stations; natural gas processing plants and commercial oil and gas disposal wells, and evaporation ponds.

(a) A source that is subject to an approval order in accordance with R307-401-8 is exempt from R307-505.

**R307-505-3. Registration Requirements**

(1) An owner or operator of a source identified in R307-505-2 that begins operations on or after January 1, 2018, shall register with the director 30 days prior to commencing operation.

(2) An owner or operator of a source identified in R307-505-2 that is in operation before January 1, 2018, shall register with the director by July 1, 2018.

(3) An owner or operator shall update the registration information within 30 days of any of the following:

- (a) changes to company name,
- (b) removal or addition of control devices, or
- (c) termination of operations.

(4) Registration shall be completed online in a format provided by the Division and shall include the following general information: company name, mailing address, source location, source manager or point of contact, process description, capacity and quantity of emitting equipment on-site, fuel type of combustion related equipment (i.e. diesel, natural gas, propane, or field gas), emissions control devices installed, emissions and certification that the facility is in compliance with R307-506 through R307-510.

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**R307-506. Oil and Gas Industry: Storage Vessel.**

**R307-506-1. Purpose.**

R307-506 establishes requirements to control emissions of volatile organic compounds (VOCs) from storage vessels associated with a well site.

#### **R307-506-2. Definitions.**

"Centralized Tank Battery" means a separate tank battery surface site collecting crude oil, condensate, intermediate hydrocarbon liquids, or produced water from wells not located at the well site.

"Emergency Relief Storage Vessel" means a storage vessel receiving oil, condensate, or produced water as a result of emergency situations, process upsets, or other equipment malfunctions.

"Modification to a well site" means;

- (1) a new well is drilled at an existing well site,
- (2) a well at an existing well site is hydraulically fractured, or
- (3) a well at an existing well site is hydraulically refractured.

"Storage Vessel" means storage vessel as defined in 40 CFR 60.5430a, Subpart OOOOa Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution, which is incorporated by reference in R307-210.

"Uncontrolled emissions" means actual emissions or the potential to emit without consideration of controls.

#### **R307-506-3. Applicability.**

(1) R307-506 applies to each storage vessel located at a well site as defined in 40 CFR 60.5430a, Subpart OOOOa, Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution.

(2) R307-506 shall apply to centralized tank batteries.

(3) R307-506 does not apply to storage vessels that are subject to an approval order issued under R307-401-8.

#### **R307-506-4. Storage Vessel Requirements.**

(1) Thief hatches on storage vessels shall be kept closed and latched except during vessel unloading or other maintenance activities.

(2) All storage vessels located at a well site that are in operation as of January 1, 2018, with a site-wide throughput of 8,000 barrels or greater of crude oil or 2,000 barrels or greater of condensate per year on a rolling 12-month basis shall comply with R307-506-4(2)(a) unless the exemption in R307-506-4(2)(b) applies.

(a) VOC emissions from storage vessels shall either be routed to a process unit where the emissions are recycled, incorporated into a product and/or recovered, or be routed to a VOC control device that is in compliance with R307-508.

(b) All storage vessels located at a well site shall be exempt from R307-506-4(2)(a) if combined VOC emissions are demonstrated to be less than four tons per year of uncontrolled emissions on a rolling 12-month basis.

(i) VOC working and breathing losses, and flash emissions shall be calculated using direct site-specific sampling data and any software program or calculation methodology in use by industry that is based on AP-42 Chapter 7.

(3) All storage vessels that begin operations on or after January 1, 2018, are required to control VOC emissions in accordance with R307-506-4(2)(a) upon startup of operation for a minimum of one year.

(4) An emergency storage vessel located at a well site shall be exempt from R307-506-4(2)(a), if it meets the following requirements:

(i) The emergency storage vessel shall not be used as an active storage tank.

(ii) The owner or operator shall empty the emergency storage vessel no later than 15 days after receiving fluids.

(iii) The emergency storage vessel shall be equipped with a liquid level gauge or equivalent device.

(5) An owner or operator that is required to control emissions in accordance with R307-506-4(2) and R307-506-4(3) shall inspect at least once a month each closed vent system, including vessel openings, thief hatches, and bypass devices, for defects that can result in air emissions according to 40 CFR 60.5416a(c).

(a) If defects are discovered, the defects shall be corrected or repaired within 15 days of identification.

(6) Modification to a well site shall require a re-evaluation of site-wide throughput and/or emissions in accordance with R307-506-4(2).

(7) After a minimum of one year of operation, controls may be removed if site-wide throughput is less than 8,000 barrels of crude oil or 2,000 barrels of condensate on a rolling 12-month basis or uncontrolled actual emissions are demonstrated to be less than four tons per year.

#### **R307-506-5. Recordkeeping**

(1) Records of each closed vent system inspection, including vessel openings, thief hatches, pressure relief devices and bypass device shall be kept for three years.

(a) Records of each closed vent system inspection, including vessel openings, thief hatches, pressure relief devices and bypass device shall include the date of the inspection, the status of each closed vent system, including vessel openings, thief hatches, pressure relief devices and bypass device, and the date of corrective action taken if required.

(2) Records of crude oil throughput shall be kept for three years and shall be determined on a monthly basis using the production data reported to the Utah Division of Oil, Gas, and Mining.

(3) Records of emission calculations, actual emissions, and site-specific sampling data used to determine compliance with R307-506-4(2)(b) shall be kept for a period of three years, post registration.

(4) Records of emergency storage vessel usage shall be kept for a period of three years.

(a) Records of emergency storage vessel usage shall include the date the vessel received fluids or was discovered to have received fluids, the date the overflow tank was emptied, and the volume of fluids emptied in barrels.

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**R307. Environmental Quality, Air Quality.****R307-507. Oil and Gas Industry: Dehydrators.****R307-507-1. Purpose.**

R307-507 establishes requirements to control emissions of volatile organic compounds (VOCs) from dehydrators associated with a well site.

**R307-507-2. Definitions.**

"Dehydrator" means dehydrator as defined in 40 CFR 60.5430a, Subpart 0000a Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution, which is incorporated by reference in R307-210.

"Uncontrolled emissions" means actual or potential emissions without consideration of controls.

**R307-507-3. Applicability.**

(1) R307-507 applies to each dehydrator located at a well site as defined in 40 CFR 60.5430a, Subpart 0000a, Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution.

(2) R307-507 shall apply to centralized tank batteries, as defined in R307-506-2.

(3) R307-507 does not apply to a dehydrator that is subject



to an approval order issued under R307-401-8.

#### **R307-507-4. Dehydrator Requirements.**

(1) Dehydrators with VOC emissions of four tons of uncontrolled emissions per year or greater, either individually or combined with VOC emissions from storage vessels, shall either be routed to a process unit where the emissions are recycled, incorporated into a product, and/or recovered, or be routed to a VOC control device that is in compliance with R307-508. Dehydrators in operation before January 1, 2018, shall determine applicability with calculated actual emissions. Dehydrators in operation on or after January 1, 2018, shall determine applicability using potential to emit.

(2) An owner or operator that is required to control emissions in accordance with R307-507-4(1) shall inspect, at least once a month, each closed vent system, including vessel openings, thief hatches, and bypass devices, for defects that can result in air emissions according to 40 CFR 60.5416a(c).

(a) If defects are discovered, the defects shall be corrected or repaired within 15 days of identification.

(3) Modification to a well site shall require a re-evaluation of emissions in accordance with R307-507-4(1).

(4) After a minimum of one year of operation, controls may be removed if uncontrolled actual emissions, individually or combined with VOC emissions from storage vessels, are less than four tons per year on a rolling 12-month basis.

#### **R307-507-5. Recordkeeping**

(1) Records of emission calculations shall be kept for all periods the plant is in operation if a control device is not installed on-site.

(2) Records of each closed vent system inspection, including vessel openings, thief hatches, pressure relief devices and bypass devices, shall be kept for three years.

(a) Records of each closed vent system inspection, including vessel openings, thief hatches, pressure relief devices and bypass devices, shall include the date of the inspection, the status of each closed vent system, including vessel openings, thief hatches, pressure relief devices and bypass devices, and the date of corrective action taken, if required.

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### **R307. Environmental Quality, Air Quality.**

#### **R307-508. Oil and Gas Industry: VOC Control Devices.**

##### **R307-508-1. Purpose.**

R307-508 establishes requirements for VOC control devices associated with well sites used to control emissions of VOCs.

**R307-508-2. Applicability.**

(1) R307-508 applies to each VOC control device located at a well site as defined in 40 CFR 60.5430a Subpart OOOOa Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution.

(2) R307-508 shall apply to centralized tank batteries, as defined in R307-506-2.

(3) R307-508 does not apply to VOC control devices that are subject to an approval order issued under R307-401-8.

**R307-508-3. VOC Control Device Requirements.**

(1) A VOC control device required by R307-506 or R307-507 must have a control efficiency of 95% or greater.

(a) The VOC control device shall operate with no visible emissions.

(b) The VOC control device must comply with R307-503.

(2) A well site shall demonstrate compliance by meeting the performance test methods and procedures specified in 40 CFR 60.5413.

(3) VOC control devices and all associated equipment shall be inspected monthly by audio, visual, or olfactory (AVO) means to ensure the integrity of the equipment is maintained and is operational. If equipment is not operational, corrective action shall be taken within 15 days of discovery.

**R307-508-4. Recordkeeping.**

(1) The owner or operator shall keep and maintain records of the VOC control device's control efficiency guaranteed by the manufacturer. These records shall be retained for the life of the control equipment on site.

(2) The owner or operator shall keep and maintain records of the manufacturer's written operating and maintenance instructions. These records shall be retained for the life of the control equipment.

(3) The owner or operator shall keep and maintain records of the VOC control device AVO inspections. These shall be retained for a minimum of three years. These records shall include:

(a) the date of the inspection;

(b) the status of the control device and associated equipment; and

(c) date of corrective action taken, if applicable.

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**R307. Environmental Quality, Air Quality.****R307-509. Oil and Gas Industry: Leak Detection and Repair Requirements.****R307-509-1. Purpose.**

R307-509 establishes requirements for conducting leak detection and repairs at well sites to control emissions of volatile organic compounds.

#### **R307-509-2. Definitions**

"Difficult-to-Monitor" means difficult-to-monitor as defined 40 CFR 60.5397a, which is incorporated by reference in R307-210.

"Fugitive emissions" are considered any visible emissions observed using optical gas imaging or a Method 21 instrument reading of 500 ppm or greater.

"Fugitive emissions component" means any component that has the potential to emit fugitive emissions of VOC, including but not limited to valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems, thief hatches or other openings, compressors, instruments, and meters.

"Unsafe-to-Monitor" means unsafe-to-monitor as defined 40 CFR 60.5397a, which is incorporated by reference in R307-210.

#### **R307-509-3. Applicability.**

(1) R307-509 applies to each fugitive emissions component at a well site as defined in 40 CFR 60.5430a, Subpart 0000a, Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution and is required to control emissions in accordance with R307-506 and R307-507.

(a) A source meeting the requirements of 40 CFR 60.5397a is meeting the requirements of this rule.

(b) Sources subject to R307-509, are subject until the well is shut in.

(c) R307-509 does not apply to a fugitive emissions component that is subject to an approval order issued under R307-401-8.

#### **R307-509-4. Leak Detection and Repair Requirements.**

(1) Applicable sources shall comply with the following:

(a) The owner or operator shall develop an emissions monitoring plan that shall be available upon request to review for each individual well site. At a minimum, the plan shall include:

- (i) monitoring frequency;
- (ii) monitoring technique and equipment;
- (iii) procedures and timeframes for identifying and repairing leaks;
- (iv) recordkeeping practices; and
- (v) calibration and maintenance procedures for monitoring equipment.

(b) The plan shall address monitoring for difficult-to-monitor and unsafe-to-monitor components.

(c) The owner or operator shall conduct monitoring surveys

on site to observe each fugitive emissions component for fugitive emissions.

(d) Monitoring surveys shall be conducted according to the following schedule:

(i) No later than 365 days after January 1, 2018, or no later than 60 days after startup of production, as defined in 40 CFR 60 Subpart 0000a Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution, whichever is later.

(ii) Semiannually after the initial monitoring survey. Consecutive semiannual monitoring surveys shall be conducted at least four months apart.

(iii) Annually after the initial monitoring survey for "difficult-to-monitor" components.

(iv) As required by the owner or operator's monitoring plan for "unsafe-to-monitor" components.

(e) Monitoring surveys shall be conducted using one or both of the following to detect fugitive emissions:

(i) Optical gas imaging (OGI) equipment. OGI equipment shall be capable of imaging gases in the spectral range for the compound of highest concentration in the potential fugitive emissions source.

(ii) Monitoring equipment that meets U.S. EPA Method 21, 40 CFR Part 60, Appendix A.

(f) If fugitive emissions are detected at any time, the owner or operator shall repair the fugitive emissions component as soon as possible but no later than 15 calendar days after detection. If the repair or replacement is technically infeasible, would require a vent blowdown, a well shutdown or well shut-in, or would be unsafe to repair during operation of the unit, the repair or replacement shall be completed during the next well shutdown, well shut-in, after an unscheduled, planned or emergency vent blowdown or within 24 months, whichever is earlier.

(g) The owner or operator shall resurvey the repaired or replaced fugitive emission component no later than 30 calendar days after the fugitive emission component was repaired.

#### **R307-509-5. Recordkeeping.**

(1) The owner or operator shall maintain records of the emissions monitoring plan. These records shall be retained for the life of the well site.

(2) The owner or operator shall maintain records of the monitoring surveys, repairs, and resurveys. These records shall be retained for a minimum of three years.

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#### **R307. Environmental Quality, Air Quality.**

**R307-510. Oil and Gas Industry: Natural Gas Engine Requirements.**

**R307-510-1. Purpose.**

R307-510 establishes control requirements for stationary engines associated with well sites.

**R307-510-2. Definitions.**

"Site hp" means the total horse power rating of all engines within the boundaries of the source.

**R307-510-3. Applicability.**

(1) R307-510 applies to each natural gas-fired engine at a well site as defined in 40 CFR 60.5430a, Subpart 0000a Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution, that began operations, installed new engines, or made modifications to existing engines after January 1, 2016.

(2) R307-506 shall apply to centralized tank batteries, as defined in R307-506-2.

(3) R307-510 does not apply to a natural gas-fired engine that is subject to an approval order issued under R307-401-8.

**R307-510-4. Engine Requirements.**

(1) Regardless of construction, reconstruction, or modification date, each stationary engine at a well site shall comply with the emission standards listed in Table 1 when the engine is installed, relocated, or modified.

Maximum Engine hp	Table 1 Emission Standards in (g/hp-hr)			
	NO <sub>x</sub>	CO	VOC	HC+NO <sub>x</sub>
≥25 hp and < 100 hp	-	4.85	-	2.83
≥100 hp	1.0	2.0	0.7	-

(2) The owner or operator shall either:

(a) purchase a certified stationary internal combustion engine as defined in 40 CFR 60.4248, or

(b) conduct an initial performance test according to 40 CFR 60.4244.

(3) Each engine shall vent exhaust gases vertically unrestricted with the following stack height requirements:

(a) For site hp ratings of 306 or greater, each engine shall have an attached stack height of no less than 10 feet.

(b) For site hp ratings of 151 to 305 hp, each engine shall have an attached stack height of no less than 8 feet.

(c) For site hp ratings of 150 hp or less, there are no stack height requirements on engines.

**R307-510-4. Recordkeeping.**

For each engine on site, the owner or operator shall maintain records of the engine certification or initial performance test for the period of time the engine is on the well site.